



**INDOT SWQMP**  
**Annual Report**  
**April 2016-April 2017**

# **INDOT SWQMP Annual Report – April 2016- April 2017**

## ***Characterization and Prioritization of Receiving Waters***

### **0A-Identify Receiving Waters**

*Identify all known receiving waters that overlap with INDOT roadways and other facilities within 2010 Census mapped Urbanized Areas (UA). Send findings and completed SWQMP - Part B to IDEM within 180 days of the NOI date. Updates to the Baseline Characterization will be submitted in the annual reports and will be kept in the MS4 Coordinator's files.*

**This measure was completed and submitted to IDEM on October 24, 2014.**

### **0B- Identify Impaired Waters**

*Identify impaired receiving waters within UA. Send findings and completed SWQMP - Part B to IDEM within 180 days of the NOI date. Updates to the Baseline Characterization will be submitted in the annual reports and will be kept in the MS4 Coordinator's files.*

**This measure was completed and submitted to IDEM on October 24, 2014.**

### **0C- Identify Sensitive Waters**

*Identify known sensitive waters such as swimming areas, water supplies, endangered species habitat, outstanding resource and exceptional waters that overlap INDOT roadways and facilities within UA. Send findings and completed SWQMP - Part B to IDEM within 180 days of the NOI date. Updates to the Baseline Characterization will be submitted in the annual reports and will be kept in the MS4 Coordinator's files.*

**This measure was completed and submitted to IDEM on October 24, 2014.**

### **0D- Part B**

*Submit Part B: Baseline Characterization and Report to IDEM*

**This measure was completed and submitted to IDEM on October 24, 2014.**

### **0E- Part C (4/28/15)**

*Submit Part C: Program Implementation to IDEM*

**The step by step Rule 13 program implementation was included in the 2014-2015 Annual Report.**

## ***Public Education and Outreach***

### **1A-Awareness Program (12/15/14)**

*Develop and/or update a public awareness program including brochures, electronic communications, etc. The completion of this goal will be measured by the delivery of business rules and formal INDOT policies that describe the communication method, frequency and measure of success for this awareness program. Communications and measures of success will be included in the annual report and kept in the MS4 Coordinator's files.*

**Public Awareness program Completed for 2014-2015 Annual Report. New for this permit cycle is a Storm Water Awareness Brochure. This brochure is currently being printed. Each district is going to be receiving copies, along with each Highway Rest Area, and will be distributed at public hearings for up-coming projects. This brochure is also located on the INDOT Storm Water webpage and the ERIN Document Library webpage. A copy of this brochure is kept in the MS4 Coordinator's files.**

### **1B-Awareness Training (12/15/14)**

*Develop and/or update a program of annual stormwater pollution awareness training for appropriate INDOT maintenance staff. Training shall include general stormwater awareness, identification of stormwater pollution potential, and appropriate contacts for reporting spills and illicit discharges. The completion of this goal will be measured by the submittal of the training materials, frequency, audience and number of people trained each year. This information will be kept in the MS4 Coordinator's files.*

**The Storm Water Awareness Training for INDOT Maintenance staff is in production. There are two trainings. The maintenance staff training is being developed through the INDOT University On-Line Training program. This will be an annual mandatory training. A separate more detailed training will be provided to INDOT Maintenance Supervisors/Foremen in either a live webinar or presented at each district. This will allow for questions and answers so that the supervisors/foremen will be more informed to supervise their staff. Printed copies of both training programs are included in the Coordinator's files for review.**

### **1C- Volunteer Training (09/25/14)**

*Develop and/or update an ongoing program for training Adopt-A-Highway volunteers. The completion of this goal will be measured by the submittal of the training materials, frequency and trainee audience each year. This information will be kept in the MS4 Coordinator's files.*

**Adopt-A-Highway volunteers receive a fact sheet about storm water quality that was included in their training briefing. A copy of the fact sheet is kept in the MS4 Coordinator's files.**

### **1D- Internal Education and Involvement Plan (12/15/14)**

*Develop and/or update an Internal Education and Involvement Plan. The plan shall detail the internal training requirements related to the assigned specific responsibilities of INDOT staff. The completion of this goal will be measured by the submittal of the Internal Education and Involvement Plan, any training materials developed and an accounting of staff trained in each year. This information will be kept in the MS4 Coordinator's files.*

**The internal education and involvement plan was completed for the 2014-2015 annual report. The total number of INDOT Construction staff that has attended the Storm Water Management training in this permit cycle is 109. Plan kept in the MS4 Coordinator's files.**

### **1E- Public Involvement Programs (Ongoing)**

*Continue the Trash Bash, Adopt-A-Spot, Sponsor-A-Highway and Adopt-a-Highway programs. Timber planting, native vegetation and additional programs may also be expanded or developed. The completion of this goal will be measured by the annual submission of documentation of the number of programs, projects, lane miles or areas adopted and number of participants.*

**Throughout the State dedicated citizen volunteers participate in programs such as Trash Bash Adopt-A-Highway, Adopt-A-Spot as well as Sponsor-A-Highway programs. Reportable numbers of programs, projects, lane miles, areas adopted and numbers of participants are recorded by each district. INDOT does keep track of the amount of litter that these volunteers gather and that data is recorded for MCM 1F. INDOT Public Involvement Policies and Procedure Manual is located in the MS4 Coordinator's files.**

### **1F- Anti-Litter Programs (09/25/14)**

*Develop informational anti-litter and vehicle maintenance programs designed to educate and involve the public in reducing this major cause of storm water pollution. The completion of this goal will be measured by the annual submission of the communication message (i.e. proper disposal of cigarette butts), type (i.e. signs on restroom doors), message (i.e. copy of poster), quantity delivered (i.e. posted on 50 restroom doors for six months) and estimated audience reached for each communication activity. This information will be kept in the MS4 Coordinator's files.*

**INDOT has a webpage dedicated information about trash removal on INDOT right-of-way. ([www.in.gov/indot/2596](http://www.in.gov/indot/2596)) There are many litter clean up events and groups that routinely pick up litter on INDOT right of way. The numbers for 2016 Trash Bash include 5735 bags of trash and 500 pounds of loose debris from 1,151 miles of state highways and right-of-way. There were 882 volunteers and Department of Correction crews who participated in Trash Bash. For more information about Trash Bash please see INDOT's web page:**

**<http://www.in.gov/indot/2596.htm>**

### **1G- Storm Water Web Site (12/15/14)**

*INDOT's website will be expanded to include a storm water web page with information on INDOT storm water activities. These will include outreach programs, brochures, guidelines for erosion and sediment control, maintenance activities and how to obtain information. The completion of this goal will be measured by the annual submission of documentation of website content and the number of visitors to the website. This information will be kept in the MS4 Coordinator's files.*

**During the 2016-2017 permit cycle there were 2049 visits to the page and 3198 views. This is up significantly from the last permit cycle.**

**<http://www.in.gov/indot/2892.htm>**

### **1H- Storm Water Information Center (12/15/14)**

*Create an online library of storm water-related materials accessible through the storm water website. Materials will be updated quarterly with the most recent guidance, research, publications and training materials. The completion of this goal will be measured by annual submission of a list of available library resources and the number of visitors to the website. This information will be kept in the MS4 Coordinator's files.*

**The INDOT Storm Water Information Center is intended as a resource for MS4 communities and other user groups throughout the state of Indiana. This on-line library exists to distribute material in various forms that can assist MS4 communities and others that are interested in the prevention of storm water pollution. The Information Center contains various materials including brochures, handouts, processes, research articles, website links, and other material. New material has been added during this permit cycle. This material can be accessed through the INDOT Storm Water webpage. <http://www.in.gov/indot/2892.htm>**

### **1I- Employee Education (Ongoing)**

*Publish two articles in either The Torch (monthly State Personnel Department) and/or Inside INDOT (monthly INDOT) publications annually. The completion of this goal will be measured by annual submission of copies of the articles and an estimate of the number of recipients. This information will be kept in the MS4 Coordinator's files.*

**Two articles have been published internally and distributed via INDOT intranet and email during this annual report cycle. A poster with the theme of preventing flooding of city and neighborhood streets was also displayed in the IGC South Tunnel. Copies of these articles and tunnel poster can be found in the MS4 Coordinator's files.**

### **1J- Collaboration (03/15/15)**

*Coordinate with IDEM and MS4s statewide to share ideas and resources. The completion of this goal will be measured by including the agenda, copies of the presentations, discussion group notes, attendee list, and INDOT participants (presenters, volunteers, etc.) in the annual report. This information will be kept in the MS4 Coordinator's files.*

**The INDOT MS4 coordinator continues to sit on the Indiana MS4 Partnership committee and attends regular meetings. The MS4 Annual Meeting will be held on May 16<sup>th</sup>, 2017. The MS4 coordinator continues to work on the planning committee for that conference. She will**

moderate sessions and be available for questions. The Indiana MS4 Partnership is working on 501 (c) (3) status to further the goals of the organization. More information about this growing organization can be found at [www.indianams4.org](http://www.indianams4.org) and in the MS4 Coordinator's files. The district's INDOT Construction Erosion Control Specialist have some involvement with the MS4 groups in their area.

### **1K- Road School (06/15/15)**

*Develop storm water quality training module(s) and present annually at the Purdue Road School (Joint Transportation Research Program (JTRP) and Indiana Local Technical Assistance Program (LTAP) sponsored) and the LTAP Stormwater Drainage Conference. The completion of this goal will be measured by including a copy of the presentation, number of attendees and INDOT presenters/volunteers in the annual report. This information will be kept in the MS4 Coordinator's files.*

**The MS4 Coordinator presented at the 2017 Purdue Road School on the topic of "INDOT Storm Water Program, new specs, what does it all mean?" A copy of the presentation is in the MS4 Coordinator's files. The MS4 Coordinator also presented at the 2017 LTAP on January 9<sup>th</sup> conference with the same presentation. On November 17, 2016 the MS4 Coordinator presented at the 31<sup>st</sup> Annual Civil Engineering Professional Development Seminar (CEPDS) on the topic of "INDOT Storm Water Management, Smarter Design for Improved Implementation and Compliance in the field"**

### **1L-Facility Signage (03/15/15)**

*Develop educational signage (i.e. illicit discharges, waterway protection) and install signage in rest areas, weigh stations, and other public facilities. The completion of this goal will be measured by including a copy of the signage and location installed in the annual report. This information will be kept in the MS4 Coordinator's file.*

**The "Do Your Part to Prevent Flooding" poster was displayed in the IGC South tunnel in the fall. A copy of this posters can be found in the MS4 Coordinator's files.**

### **1M- Public Education and Outreach Certification (04/28/15)**

*Submit Public education and outreach program development certification to IDEM*

**The Rule 13 state form 51279 signed by the INDOT MS4 Operator is included in this submittal and stored in the MS4 Coordinator's files.**

## ***Public Participation and Involvement***

### **2A – SWQMP Public Meetings**

*INDOT will hold a public meeting in each INDOT district once during the first year of the plan. Participants will be solicited by advertising in key newspapers and emails to MS4s located in the district. The website will be updated with a copy of the SWQMP, contact information, meeting times and locations prior to the meeting. Comments will be considered for incorporation into the SWQMP. The completion of this goal will be measured by meeting attendee records, meeting minutes and a summary of the comments received and response. This information will be kept in the MS4 Coordinator's files.*

**Completed in the 2014-2015 permit cycle**

### **2B- Public Involvement in Project Development (Ongoing)**

*Public involvement in project development follows the National Environmental Policy Act (NEPA) requirements that results in a varying amount of involvement depending on the project scope. INDOT's public includes citizens, state employees, consultants and contractors. The completion of this goal will be measured by analyzing the contracts let for the reporting year (i.e. projects let, number requiring public involvement under NEPA, number falling within a UA, etc.) and including this in the annual report. The supporting information will be available to the MS4 Coordinator through INDOT electronic storage mediums.*

**INDOT Public Involvement Procedures August 2012 is located on the internet at:**

**[http://www.in.gov/indot/files/PI\\_PublicInvolvementManual\\_2012.pdf](http://www.in.gov/indot/files/PI_PublicInvolvementManual_2012.pdf)**

**Following the public involvement requirements of the National Environmental Policy Act, INDOT holds public meetings across Indiana to inform the public and receive input for highway projects. Approximately 72 people attended INDOT public meetings in this permit cycle. There has been a series of public meetings for the I-69 Section 6 project. We have not received numbers from our consultants on attendance at the time of this report. Once INDOT receives the sign in sheets for the I-69 meetings they will be included along with all other public meeting participation sign in sheets in the MS4 Coordinator's files.**

**INDOT's current system for "Red Flagging" projects for environmental considerations involves a check list, early coordination letters and GIS maps. INDOT is working to develop a tool to track when projects are "red flagged" for being in Urbanized Areas. This way it will be possible to do a query search for projects going through the NEPA process as how many are contained in Urbanized Areas. The INDOT Environmental Policy Webpage has a section on Stormwater Coordination Guidance. A MS4 early coordination letter template is provided for those projects that fall within Urbanized Areas. There is also a link to the most current MS4 Contact list for the state of Indiana. The MS4 Coordinator worked to update the IDEM list so that designers could contact the MS4s the project effects during our planning stage of project development. This is explained in more detail in MCM 5B.**

## **2C-Annual Reporting** (Ongoing)

*An Annual Report will be developed and posted on the website. An availability notice will be sent to a list serve containing the MS4s and interested public. The completion of this goal will be measured by recording the posting of the document on the website, list serve message and tracking the public comments received, if any. This information will be kept in the MS4 Coordinator's files.*

**The 2016-2017 Annual Report will be posted on the INDOT Storm Water webpage and will be in the MS4 Coordinator's files.**

## **2D- Public Involvement and Participation Certification** (04/28/15)

*Submit Public involvement and participation program development certification to IDEM*

**The Rule 13 State Form 51273 has been signed by INDOT's MS4 Operator, and is attached to this annual report and is housed in the MS4 Coordinator's files.**



## ***Illicit Discharge Detection and Elimination***

### **3A- IDDE Program Development (12/15/14)**

*INDOT will develop a program for illicit discharge detection and elimination. The completion of this goal will be measured by including a summary and a copy of the program and policies developed in the annual report. The information will be kept in the MS4 Coordinator's files.*

**INDOTs current IDDE Program and policies are contained in an INDOT Operations Memo 09-07. This policy is currently being evaluated and updated for improved compliance.**

**Coordination is occurring between INDOT Hazardous Waste Management, INDOT Environmental Services, INDOT Safety, INDOT Facilities, IDEM Emergency Response, and INDOT Maintenance. A new Hazardous Material Unit Operating Manual should be completed by the Summer of 2017. An expanded and up to date section has been added to the INDOT Environmental Policy webpage ([www.in.gov/indot/2523](http://www.in.gov/indot/2523)) with more guidance and the Red Flag template. The new policies and procedures will be part of the new trainings that will be rolled out later this summer; Storm Water Awareness, and IDDE Training. A copy of Memo is kept electronically and in hard copy within the MS4 Coordinator's files.**

### **3B- IDDE Program Review (01/15/15)**

*INDOT shall review their programs, policies, practices for issuing utility and access permits and make modifications necessary to ensure that non-storm water discharges are not connected into the INDOT storm sewer system. The completion of this goal will be measured by including a summary and copy of the changes to the policies in the annual report. The information will be kept in the MS4 Coordinator's files.*

**The INDOT Driveway Permit Manual is currently in the process of being updated. A draft of the changes are in the MS4 coordinator's files. Formal policies for IDDE are in development.**

**Section 24: Drainage section of the Drive Way Permit Manual (1996) contains the most relevant information and can be found at: <http://www.in.gov/indot/files/driveway.pdf>.**

**Information is located in the MS4 Coordinator's files.**

### **3C-IDDE Reporting (01/15/15)**

*INDOT shall develop a standard reporting format and phone and website contacts for all complaints and reports of illicit discharges. The completion of this goal will be measured by including a copy of the reporting form and a summary of complaints received and actions taken in the annual report. The information will be kept in the MS4 Coordinator's files.*

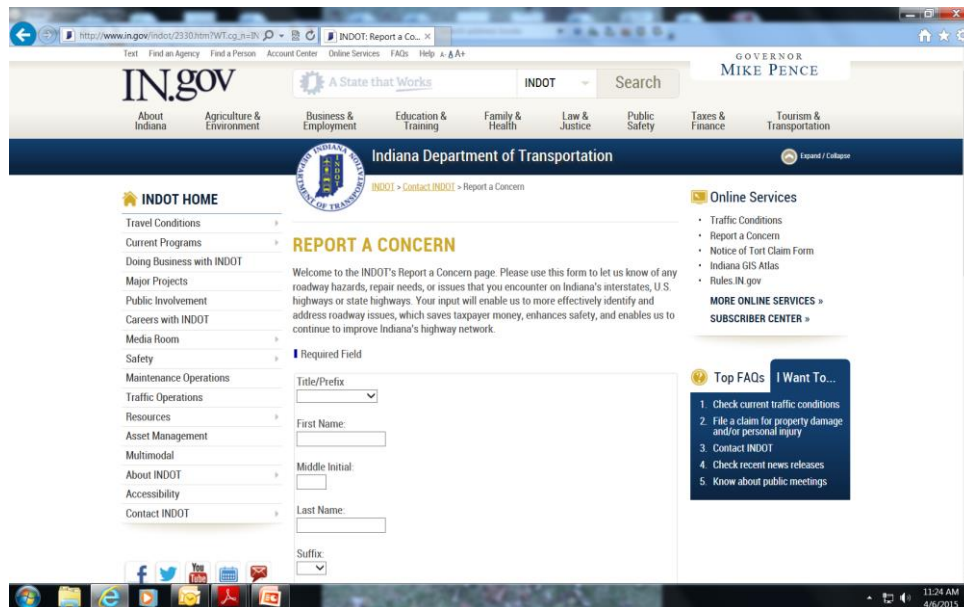
**See Something, Smell Something, Say Something.**



**Storm Water Pollution**  
Help INDOT keep our right-of-way clean and waters free of pollution. If you see or smell pollution in an INDOT right-of-way, use this new form to report what you observed.

In 2016 an internal pollution reporting campaign was kicked off. The banner above was displayed on the home page ERIN (Employee Resource Internal News). This provides an easy way for INDOT employees to report Right-of-Way pollution when doing field work. The MS4 Coordinator has met with the Bridge Inspectors as part of their annual conference to explain the IDDE program and how they can report an issue they might find in the field. Issues reported through this outlet are addressed individually and reported to the district. Once at the district maintenance is involved and any clean up or repairs are done by district maintenance staff. Complaints are stored in the MS4 Coordinator's files.

The icon "Report a Concern" is on every INDOT webpage and is on the INDOT Storm Water Webpage so that citizens can submit an electronic concern that automatically notifies the INDOT MS4 Coordinator when there is a concern that needs addressing. The INDOT IQ Customer Service data base records complaints and reports of Storm Water and Drainage related issues from emails and phone calls from Indiana Citizens. Copies of every data entry related to storm water are in the MS4 Coordinator's files.



These issues/complaints are forwarded to the individual district for addressing. During this permit cycle 377 total issues/complaints for flooding were reported and resolved, 1160 total issues/complaints for drainage were reported and resolved. Each individual issues/complaint can be found in the MS4 Coordinator's files.

### 3D- IDDE Staff Training (05/15/14)

*INDOT shall develop a training program and provide it annually to appropriate staff and contractors. Training shall include identification and reporting of illicit discharges and illegal dumping. The completion of this goal will be*

measured by including a copy of the training material, a summary of the individuals that received training (number, contractor, INDOT, etc.) in the annual report. The information will be kept in the MS4 Coordinator's files.

**IDDE training has been incorporated into the INDOT Storm Water Awareness Training for Maintenance Staff. A copy of this training material can be found in the MS4 Coordinator's files. This training should be rolled out in the summer of 2017 and will be a mandatory annual web-based training.**

### **3E- Facilities Mapping (06/15/15)**

Complete GIS mapping of all INDOT facilities other than roadways (i.e. district, sub district and maintenance offices, salt storage, rest areas, etc.) statewide. The completion of this goal will be measured by including the number and type of additional facilities mapped in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.

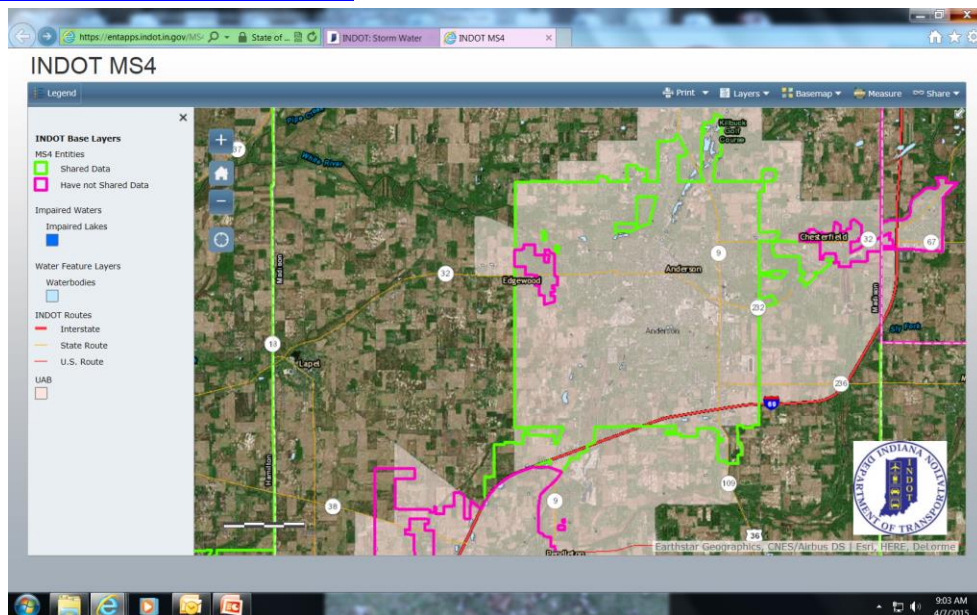
**INDOT is currently completing the required facility mapping as part of the facility SWPPP development. As of April 2017 INDOT has completed 31 out of 43 facilities mapped and 37 out of 43 facilities have completed their SWPPP. Walsh from the Ohio River Bridges project has submitted to INDOT their maintenance building SWPPP and mapping. The I-90 toll road has not reported anything to INDOT at this time.**

### **3F- Outfall Mapping GIS (09/10/14)**

Develop a GIS database for mapping of conveyances and outfalls within UA. Database tracking and reporting is described in measures 3H-3K. The completion of this goal will be measured by the completion of 3H, 3I and 3K and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.

**This GIS Map of UABs is available to public view on the INDOT Storm Water Website. INDOT has been collecting GIS data from MS4s though out the state.**

<http://www.in.gov/indot/2892.htm>



### **3G- Outfall Mapping SOP (07/15/14)**

*Develop SOP for as built outfall data collection and for incorporating data into GIS when the collection tools and procedures are implemented. The completion of this goal will be measured by including a copy of the SOP in the annual report. The information will be kept in the MS4 Coordinator's file.*

**INDOT's current approach to Outfall Mapping SOP is to update the database with new outfalls on a project by project basis. INDOT as an agency is in the process of acquiring the technology, developing a database, and an SOP for data collecting. This is an agency wide effort that includes all INDOT drainage structures, bridges and culverts. The MS4 coordinator is working with the team developing this effort including assisting on the SOP. INDOT is also working on developing "as built" requirements for identifying and mapping structures upon project completion. During the design phase of the INDOT project the designer will enter the location(s) of outfalls into the database, as part of final tracings or other end of the project milestone. These locations can then be verified with a field check at project completion.**

### **3H- Outfall Mapping 1Q (10/01/15)**

*Map first 25% of conveyances and outfalls within UA. Collect existing outfall data from local MS4s to minimize redundancy. Verify accuracy of MS4 information. Maps will be housed in the INDOT GIS system and can be made available to IDEM and other MS4s. The completion of this goal will be measured by either MS4, county, road mile or other measurable unit and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 Coordinator.*

**Completed in the 2014-2015 reporting cycle**

### **3I- Outfall Mapping 2Q (09/30/16)**

*Complete mapping of 50% of conveyances and outfalls within UA. Collect existing outfall data from local MS4s to minimize redundancy. Verify accuracy of MS4 information. Maps will be housed in the INDOT GIS system and can be made available to IDEM and other MS4s. The completion of this goal will be measured by either MS4, county, road mile or other measurable unit and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.*

**INDOT has currently collected outfall GIS data from 51 Indiana MS4s. The MS4 map is in real time and all the current MS4 data is recorded on the map. The map can be found at:**

**<https://entapps.indot.in.gov/MS4/>**

**There have been multiple attempts to encourage Indiana MS4s to share their data with INDOT. The MS4 coordinator will again ask for data at the 2017 MS4 Annual Meeting at a session about Outfall Mapping.**

### **3J- Outfall Mapping 3Q (09/30/17)**

*Complete mapping of 75% of conveyances and outfalls within UA. Collect existing outfall data from local MS4s to minimize redundancy. Verify accuracy of MS4 information. Maps will be housed in the INDOT GIS system and can be made available to IDEM and other MS4s. The completion of this goal will be measured by either MS4, county, road mile or other measurable unit and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.*

**INDOT's current approach to the Outfall Mapping SOP is to create a database of outfalls and to update that database in coordination with a variety of INDOT activities such as maintenance, condition inspection and new projects. INDOT Environmental Services is working with multiple departments within INDOT to develop the mapping program.**

### **3K- Outfall Mapping 4Q (09/30/18)**

*Complete mapping of 100% of conveyances and outfalls within UA. Collect existing outfall data from local MS4s to minimize redundancy. Verify accuracy of MS4 information. Maps will be housed in the INDOT GIS system and can be made available to IDEM and other MS4s. The completion of this goal will be measured by either MS4, county, road mile or other measurable unit and will be discussed in the annual report. The information will be stored in the INDOT GIS system and accessible to the MS4 operator.*

**An update on this measure will be provided in the 2018 Annual Report.**

### **3L- Illicit Discharge Certification (04/28/15)**

*Submit Illicit Discharge Detection and Elimination plan and regulatory mechanism certification to IDEM*

**The Rule 13 State Form 51271 has been signed by INDOT's MS4 Operator, and is attached to this annual report and is housed in the MS4 Coordinator's files.**

## ***Construction Site Stormwater Runoff Control***

### **4A-JTRP Document Updates (08/06/14)**

*Incorporate remaining updates from the JTRP study in 2014 Standard Specifications and Design Manual. The completion of the goal will be measured by summarizing the updates added to the design manual in the annual report. The MS4 operator will have access to the Design Manual and Standard Specification updates on the INDOT website.*

**INDOT is not currently working with any JTRP studies for Storm Water. However there have been some changes to our specifications that will assist construction with improved compliance and lessen issues with sediment and erosion.**

**RSP 629-R-630 Plant Growth Layer (revision 4-16-2017) A copy of this new standard can be found on line and in the MS4 Coordinator's files.**

**RSP 205-R-636 Storm Water Management (revision 3-1-2017) A copy of this new standard can be found on line and in the MS4 Coordinator's files.**

**RSP 621-R-637 Seed Mixtures and Seed Requirements (revision 9-1-2016) A copy of this new standard can be found on line and in the MS4 Coordinator's files.**

**New Concrete Waste Water Standard Specifications. INDOT has completely rewritten the concrete washout specifications. This new spec is contained in the RSP 205-R-636 (3-1-2017) for all contracts letting after March 1, 2017 the new specs apply. The contractor must provide a Concrete Waste Water plan as part of their Storm Water Quality Control Plan. More detailed requirements are contained in the ITM 803 document. A copy of the appropriate section of ITM 803 is in the MS4 Coordinator's files.**

**Storm Water Quality Control Plan. For Project letting after 9-1-2016 Contractors are required to submit a Storm Water Quality Control Plan (SWQCP) at least 14 days before the start of construction. This SWQCP gives the Contractor the opportunity to strengthen the sediment and erosion control from the original design if needed. This is leading to better compliance in the field and more contractor buy-in as part of the permitting process. Information about the SWQCP is contained in RSP 205-R-636 and ITM 803.**

**The Construction and Design Memos related to Storm Water issued during this permit cycle:**

**Construction Memorandum: 17-01**

**Construction Memorandum: 17-07**

**Design Memorandum: 16-27**

#### **4B- Certification (08/06/14)**

*Develop policy that requires contractors' onsite Erosion Control Supervisor and select INDOT personnel to be certified. Develop the certification program and training. Implement policy within 2 years. The completion of the goal will be measured by including a copy of the policy, certification program, and training materials in the annual report. The number of projects requiring the certification will be reported until the policy is fully implemented. The report will also provide a summary of the individuals that received training (contractor, designer, consultant, INDOT, etc.) The information will be kept in the MS4 Coordinator's files.*

**During the 2016-2017 permit cycle INDOT has continued to offer Storm Water Management training to the certification training has been offered to both INDOT employees and contractors. Starting in the fall of 2016, any INDOT project that disturbs soil that let after September 1<sup>st</sup>, 2016 will have the requirement that the Contractor's "Trained Individual" will at minimum have been through the INDOT Construction Storm Water Management Training and passed the exam. To date well over 600 contractors and over 400 INDOT employees have been trained. Starting in the spring of 2016 the certification program added an on-line element as part of the INDOT University system. After attending the classroom training, participants have 30 days to enter our on-line program, read additional information and take an on-line exam.**

**Copies of the Presentation and test questions are available electronically or in the MS4 Coordinator's files in hard copy.**

**The policy for this Certification Training can be found in the new INDOT Standard Specification 205**

**<http://www.in.gov/dot/div/contracts/standards/specprovta/>**

#### **4C- Rule 5 Inspection & Tracking (08/06/14)**

*INDOT district representative will visit each construction site with a Rule 5 permit quarterly, complete a Rule 5 inspection and document/track findings in central database (basically an oversight program). The completion of the goal will be measured by including a summary of the number of inspections conducted in the annual report. The supporting information will be maintained electronically and accessible to the MS4 operator.*

**For all soil disturbing projects that let after September 1, 2016. Contractors and consultants are required to submit the weekly/post rain event inspections electronically using our Field Assistant Application. The Construction Memo 16-04 and some supplemental information was distributed to contractors and consultants and can be found in the MS4 Coordinator's files. 936 electronic Storm Water Quality Inspections were recorded for this permit cycle. A copy of all submissions to date are included in the MS4 Coordinator's files.**



#### **4D- Inspection Form** (Ongoing)

*Standardized inspection form is required on all contracts let after September 1, 2012 that requires a Rule 5 permit. This inspection form is available on the INDOT website. The completion of the goal will be measured by including a copy of the form in the annual report. The form will be kept in the MS4 Coordinator's files.*

**INDOT has developed a standardized inspection form that is required to be used on all contracts let after September 1, 2012 with a Rule 5 permit. The name of this form is 108-c-192d. A copy of the inspection form is kept in the MS4 Coordinator's files.**

**INDOT now requires an electronic submission from the Field Assistant Application. This digital submission is similar to the 108-C-192d form. Information about this application is explained in 4C. Completed inspection reports are entered into the database automatically. 936 inspections have been logged since September 1, 2016. A list of these inspection reports can be found in the MS4 Coordinator's files.**

**Link to current INDOT Storm Water (Sediment and Erosion Control) Inspection Form**

**<http://www.in.gov/dot/div/contracts/standards/rsp/sep13/100/108-C-192d%20130901.pdf>**

#### **4E- Inspection Tracking** (Ongoing)

*Continue to track central office and IDEM inspections and violations in centralized database. The completion of the goal will be measured by including a summary of the inspections and violations in the annual report. The supporting information will be maintained electronically and accessible to the MS4 operator.*

**The inspections conducted by INDOT Storm Water Specialists and the IDEM Storm Water Inspectors are tracked with the computer data base Environmental Waterway Permit System (EWPS) The MS4 Coordinator has the report that shows how many inspections were conducted by INDOT Storm Water Specialists as well as the inspections conducted by IDEM Storm Water Inspectors. This report does not cover LPA projects. Totals for the time period of April 2016 to April 2017 can be found in the table below. The full report is located in the MS4 operator's files.**

<b>IDEM Storm Water Inspections</b>	<b>Satisfactory 17</b>	<b>Marginal 18</b>	<b>Unsatisfactory- Permit Violation 15</b>
<b>INDOT Storm Water Inspections</b>	<b>Satisfactory 4</b>	<b>Marginal 11</b>	<b>Unsatisfactory- Permit Violation 10</b>



#### **4F- District Inspection Employees (03/01/15)**

*Each district shall have a minimum of one full time equivalent employee dedicated to water quality compliance. The completion of the goal will be measured by including documentation of the location, personnel assigned, job description and dedicated hours in the annual report. The information will be kept in the MS4 Coordinator's file.*

**All six INDOT districts have a full time Erosion Control Specialist on staff, with offices in each district office. These individuals have been extremely helpful to the INDOT Storm Water Program. They complete site visits, quality assurance inspections, and serve as technical advisors for INDOT staff and contractors. They have been working to close out old NOTs, visit LPA projects, assist with process questions and review Storm Water Quality Control Plans. Each district wrote a slightly different job description but basically they are all completing similar tasks. Every two weeks all 6 district Erosion Control Specialists along with Central Office Storm Water Specialists participate in a conference call. These conference calls discuss issues that have come up in the various districts, discuss policy and spec changes, distribute any important information and serve as support in many other ways.**

**Current Staff Assignments:**

**La Porte District: Donovan Wilczynski**

**Fort Wayne District: Jennifer Napier**

**Crawfordsville District: Victoria Leffel**

**Greenfield District: Cory Senich**

**Seymour District: Devan Jerrell**

**Vincennes District: Rich Montgomery**

#### **4G-Field Guide (05/13/14)**

*Develop a SWQ Pocket Field Guide as technical field resource. The completion of the goal will be measured by including a copy of the pocket guide, a record of the number of guides printed and distributed in the annual report. The information will be kept in the MS4 Coordinator's file.*

[http://www.in.gov/indot/files/StormWater\\_FieldGuide\\_2015.pdf](http://www.in.gov/indot/files/StormWater_FieldGuide_2015.pdf)

**The field guide was completed in 2015 and has been distributed to INDOT Construction Storm Water Management Training participants. Two thousand (2000) copies of the manual were printed in this first printing, and 1425 have been distributed. Every participant in the INDOT Storm Water Manager Certification Training receives a hard copy of this manual. Later this year a revision will be started for this book to be printed in 2018**

#### **4H- Construction Staff E&SC Training (08/06/14)**

*Develop and implement a training program to provide INDOT construction staff an understanding regarding E&SC and waterway permitting. Recommended cycle includes initial and 3rd year review. The completion of the goal will be measured by including a copy of the training program and a summary of the individuals trained each year in the annual report. The information will be kept in the MS4 Coordinator's file.*

**Erosion and sediment control training for INDOT construction staff was completed via the certification training described in MCM 4B - Certification. Starting in the spring of 2016 the certification program added an on-line element as part of the INDOT University system. After attending the classroom training, participants have 30 days to enter our on-line program, read additional information and take an on-line exam. To date over 400 INDOT personnel have attended and passed this training.**

#### **4I- Construction Site Program Certification (04/28/15)**

*Submit Construction Site program plan and regulatory mechanism certification to IDEM*

**The Rule 13 State Form 51272 has been signed by INDOT's MS4 Operator, and is attached to this annual report and is housed in the MS4 Coordinator's files.**

## ***Post Construction Stormwater Runoff Control***

### **5A- Pollutant Identification (12/15/14)**

*Research and determine pollutants of concern and BMP effectiveness for likely pollutants. Complete a cost benefit analysis for each BMP. The completion of the goal will be measured by including a summary of the research and the cost benefit analysis in the annual report. The information will be kept in the MS4 Coordinator's file.*

**This measure was addressed by a Joint Transportation Research Project (JTRP) SPR 3941 "Lack of Data for Predicting Storm Water Pollutant Removal by Post-Construction Best Management Practices":**

**The final report and findings can be found in the MS4 Coordinators files. The following is the abstract for the report.**

"The project objective was to conduct a detailed literature review of storm water pollutants and mitigation technologies and synthesize the information so that INDOT can implement project results into standards. Because INDOT is a Municipal Separate Storm Water Sewer System (MS4) INDOT is required to minimize storm water pollution. A literature review was carried-out to identify pollutants examined by other transportation agencies, the pollutant's relevance to Indiana roadways, and the effectiveness of storm water pollution minimization best management practices (BMP). A cost benefit analysis was also conducted for a few BMP devices used in Indiana. Results showed that a variety of databases contained BMP testing studies and the same type of BMP may not perform similarly at different sites. Some BMPs can also generate pollutants. Very little BMP design, cost, and performance data were obtained during this study from INDOT and municipalities contacted due to the organizations being unable to access it. Manufacturer self-reported BMP device performance data found was not corroborated by independent device testing data. Manufacturer reported data greatly overestimated the device's cost benefit; Field validated device performance data are needed. Based on project results INDOT should consider (1) Establishing agency-wide procedures to begin collecting pertinent storm water BMP information from ongoing and planned projects, (2) Surveying which and how many BMPs are under INDOT control, (3) Apply caution when estimating BMP performance based on manufacturer reported data or BMP performance data from other parts of the U.S., (4) Conduct a field investigation to determine pollutant removal effectiveness for select BMPs."

## **5B- NEPA (06/15/16)**

*Develop policy for identifying projects in sensitive areas such as part of the Red Flag Investigation. Use GIS layer identifying these areas. The number of projects flagged will be tracked. The completion of the goal will be measured by including the revised policy and a summary of the projects flagged in the annual report. The information will be kept in the MS4 Coordinator's file.*

**The Urbanized Area Boundary (UAB) has been added to the Red Flag investigation as a layer on the GIS map. A link has been created for MS4s to the UAB layer on the GIS map. A new Red Flag Investigation process letter has been written to explain this process to designers.**

**The SOP for Early Coordination letters has been updated to include notifying MS4 operators when a project is within an MS4 area. This information can be found on the INDOT**

**Environmental Policy Webpage: [www.in.gov/2523.htm](http://www.in.gov/2523.htm)**

**To make this process function the INDOT Storm Water team updated an out of date IDEM list of all Indiana MS4 contacts. This list of MS4s and their contacts can be found on the INDOT**

**Environmental Policy Webpage: [www.in.gov/2523.htm](http://www.in.gov/2523.htm) and the INDOT Storm Water**

**Webpage [www.in.gov/2892.htm](http://www.in.gov/2892.htm). IDEM is sending the INDOT MS4 coordinator updates as reported to them so that the list can remain as up to date as possible.**

## **5C-New Impervious Pavement Policy (12/15/15)**

*Revise policy for post construction BMPs for projects with increased impervious area. Policy should consider water quality and quantity. The number of projects incorporating post-construction BMPs and BMP type will be tracked. The completion of the goal will be measured by including the revised policy and a summary of the project BMP data in the annual report. The post construction BMPs will be tracked in the GIS database created in Measure 7A. The policy information will be kept in the MS4 Coordinator's file.*

**Due to the nature of INDOT activities, safety and maintenance considerations INDOT is unable to change our current impervious pavement policy.**

## **5D- Evaluate design related BMPs (12/15/15)**

*Investigate and document stormwater quality and quantity impacts to evaluate and determine appropriate BMPs such as reduced pavement widths, eliminating curb and gutter, providing diffuse flow, etc. The investigation may consist of pilot studies, monitoring, literature research, and other appropriate resources. Documentation shall include pollutant reduction for each BMP and recommendations on incorporating these measures into the INDOT planning process. The completion of the goal will be measured by including the findings in the annual report. The information will be kept in the MS4 Coordinator's files.*

**INDOT is in the process of re-evaluating its approach to post construction BMPs after the results of SPR 3941. Considerations are currently being reviewed for changes to the INDOT design manual to incorporate design for post construction pollution prevention and containment. It is hoped that drafts of changes will be available for the next permit cycle.**

**Through efforts to improve our post construction BMP program INDOT has been working to identify type of post construction BMPs currently installed within INDOT right of way. A list of mechanical post construction BMPs is stored in the MS4 Coordinator files. As part of the agency wide mapping and facility management efforts, these post construction BMPs will be located, recorded and maintained as part of the new process and system.**

**5E-Document updates for Post Construction (06/15/16)**

*Update design manual and specifications to include new and revised policies and guidance. The design manual and specifications will be housed on the INDOT website. The completion of this goal will be measured by the inclusion of a summary of the updated design manual and specifications and documentation that they have been loaded on the INDOT website in the annual report. The supporting information will be kept in the MS4 Coordinator's files.*

**INDOT is currently reviewing considerations for adding post construction guidance to the design manual and specifications.**

**5F- Post construction Program Certification (04/27/16)**

*Submit Post construction program plan and regulatory mechanism certification to IDEM*

**The Rule 13 State Form 51274 has been signed by INDOT's MS4 Operator, and is attached to this annual report and is housed in the MS4 Coordinator's files.**

## **Operations Pollution Prevention & Good Housekeeping**

### **6A- Facility SWPPP Review (12/15/14)**

*Determine the availability of current SWPPPs. Evaluate the SWPPPs applicability to the specific district, sub district and maintenance unit location, in addition to their consistency, quality and quantity. The completion of this goal will be measured by the inclusion of a summary of the findings in the annual report. The information will be kept in the MS4 Coordinator's files.*

**The review was completed in the 2014-2015 permit cycle and can be found in the MS4 Coordinator's files.**

### **6B- Facility SWPPP Development (12/15/14)**

*Develop and implement statewide facilities SWPPP. The SWPPP will provide statewide standard information and also address requirements based on the district, sub district and maintenance unit conditions (i.e. site map showing site location in relation to nearby water bodies, classification, etc.). The SWPPP will be kept at each facility. The completion of this goal will be measured by the submittal of the facility SWPPP with the annual report and a summary of the monthly inspection reports, findings and corrective action by district. The information will be kept in the MS4 coordinator's file.*

**37 of INDOTs 43 facilities have completed their SWPPPs. In the next permit cycle INDOT will be able to report in the Rule 13 annual report, a summary of monthly inspection reports, findings and corrective action by district. A list of completed facilities and their status of completion can be found in the MS4 Coordinator's files.**

### **6C-Maintenance Guidelines (07/27/14)**

*Review and revise guidelines for right-of-way maintenance to include mowing (height, frequency, fuel consumption, etc.) and weed control (herbicide use, type, amount, frequency, etc.). The completion of this goal will be measured by the submittal of the revised guidelines with the annual report and a comparative summary of the frequency of mowing annually. The information will be kept in the MS4 Coordinator's files.*

**Operations Memorandum Vegetation Management 14-05 which is found on INDOT intranet is a set of guidelines for vegetation management on INDOTs right-of-ways. A copy of the Operations Memo 14-05 is stored in the MS4 Coordinator's files.**

### **6D- Recycling (09/15/14)**

*Review and revise the policy for recycling practices (scrap metal, tires, plastics, aluminum, paper, etc.). The amount of recycling by type will be tracked. The completion of this goal will be measured by the inclusion of the revised policy and a summary of the recycling activity in the annual report. The information will be kept in the MS4 Coordinator's file.*

**Information about INDOTs recycling programs and policy can be found on the website; <http://www.in.gov/indot/2586.htm>**

**Executive order 05-21 has the guidelines for minimizing waste and recycling at INDOT. This executive order is stored in the MS4 Coordinator's files.**

**INDOT recycles a variety of materials, including tires, shop hazardous waste, batteries, bulbs and ballasts. A spread sheet has been provided with a list of hazardous and nonhazardous**

materials that were collected for recycling has been provided and is in the MS4 Coordinator's files.

### **6E- Snow Removal practices (Ongoing)**

*Evaluate current snow removal practices and chemical storage and research feasibility and benefits of innovations to minimize fuel, salt and chemical usage with a consideration for public safety. The amount of material consumed (fuel, salt and chemicals) will be tracked in comparison to mobilizations and weather factors. The completion of this goal will be measured by the conclusion of the findings, implementation progress and usage analysis in the annual report. The information will be kept in the MS4 Coordinator's files.*

**As the cost of winter road treatments has risen over the last couple of years, reducing salt usage has become linked to minimizing costs.**

	<b>Total Season</b>		
	<b>FY16</b>	<b>5-Year Average</b>	<b>%</b>
<b>Salt Usage (tons)</b>	<b>208,401</b>	<b>303,972</b>	<b>69%</b>
<b>Weather Hours</b>	<b>158.8</b>	<b>205.4</b>	<b>77%</b>

**INDOT has started a new program involving Telemetrics, an electronic tracking system not only in salt trucks but on all INDOT vehicles. This system tracks vehicle maintenance, records data such as mileage, fuel management and driver behavior, fleet utilization and optimization and assists with snow fleet efficiency.**

**As the telematics program comes online, INDOT plans to manage in real-time the use and application rates of salt and deicing materials. The trucks will be able to communicate back to the office in an automated fashion. This sort of visibility will likely enhance the decision making process with data and conditions that has not been available in the past. The goal and the expectation is to reduce the instances where materials are broadcasted unnecessarily, yet allow field supervisors to dispatch and respond in better informed way.**

**INDOT has been committed to reducing the amount of salt needed to regain travel conditions during winter events. A large part of this effort has been to increase our abilities to mix, store, and apply salt brine. INDOT has enhanced several sites and each ones mixing operations over the last year by building a number of new facilities, most of which use a highly efficient recycling process. The new, fully automated systems are coming online at locations such as Lebanon and Loogootee Units where the stage one prewash station is located on the interior of the salt building. The advantage with these systems is that all operations are under one roof in close proximity, and the chance of environmental mishaps are greatly reduced. These new sites and many others also host added storage capacity, which gives INDOT the ability to deploy these highly effective anti-icing solutions much**

quicker than in years past. This results in savings and efficiency that allow INDOT to produce a regain to the motoring public in much more effective management of materials.

Several snow removal and salt/brine usage matrices can be found in the MS4 Coordinator's files. The INDOT Answers database keeps a very good matrix of these activities.

#### **6F- Vegetation Management (Ongoing)**

*Restrict pesticide and fertilizer usage to those materials approved by EPA. Pesticide and fertilizer shall be used in accordance with label restrictions. The completion of this goal will be measured by the inclusion of the policy in the first annual report and policy changes included in subsequent reports. The information will be kept in the MS4 Coordinator's files.*

The purpose of INDOT's vegetation management is to:

- Enhance the safety of the motoring public
- Enhance environmental protection
- Mitigate erosion while providing adequate drainage
- Promote and preserve native wildlife habitats and native flora throughout the state

The full Vegetation Management guidelines can be found at:

<http://www.in.gov/indot/3262.htm>

#### **6G-Vegetation Management Training (11/15/14)**

*Develop and conduct training for personnel assigned vegetation management responsibilities. Training will include proper mowing techniques, use, handling and application of biological and chemical agents, spill response procedures, potential water quality impacts, etc. The completion of this goal will be measured by the inclusion of the training materials and personnel trained in the annual report. This information will be kept in the MS4 Coordinator's files.*

Content is being developed to incorporate storm water awareness as well as erosion and sediment control into the vegetation management training that maintenance staff receive each year. This commitment will be completed this year.

#### **6H- Operations and Maintenance Program Certification (04/28/15)**

*Submit Operational and maintenance plan certification to IDEM*

The Rule 13 State Form 51281 has been signed by INDOT's MS4 Operator, and is attached to this annual report and is housed in the MS4 Coordinator's files.



## ***Ongoing Water Quality Characterization/BMP Inspection & Maintenance***

### **7A- BMP Tracking (12/15/15)**

*Develop database of structural BMP locations, to include watershed, level/type of service, maintenance required, maintenance completed, cost, etc. Incorporate structural BMP information for past projects. Create SOP for tracking future projects in GIS based database. The completion of this goal will be measured by the number of structural BMP locations in the database and development of the SOP that will be included in the annual report. This information will be kept in the MS4 Coordinator's files.*

**Efforts are moving forward for an agency wide mapping program and database. The INDOT Central Office Storm Water team is assisting in the development of a SOP as well as example photographs of post construction BMPs. A list of existing post construction mechanical devices has been completed and these BMPs will be entered into the asset management program for maintenance. The complete list of post construction BMPs that have been located is on file with the MS4 Coordinator's files.**

### **7B- BMP Inspection Manual (12/15/15)**

*Develop written procedures outlining the inspection and maintenance requirements for structural stormwater BMPs. Written procedures will outline the inspection frequency, provide an inspection checklist, "how-to" instructions for regular maintenance, evaluation and reporting procedures for non-routine maintenance, and an inspection and maintenance tracking mechanism. The completion of this goal will be measured by the submission of the written procedure in the annual report with subsequent reports providing procedure updates made during the year. The written procedure will be kept in the MS4 Coordinator's files.*

**An update on this measure will be provided in the 2018 Annual Report.**

### **7C- Develop BMP Inspection Program (11/15/16)**

*Develop and implement a BMP Inspection and Maintenance Program. The program will include development and presentation of training for appropriate INDOT staff and contractors. The completion of this goal will be measured by the submission of the training materials and number of people trained by district in the annual report. The report will also include a summary of inspection and maintenance activity by district. The training materials and training records will be kept in the MS4 Coordinator's file.*

**An update on this measure will be provided in the 2018 Annual Report.**

### **7D- Evaluation of BMP Inspection Policies (12/15/17)**

*Develop and implement a water quality sampling plan to evaluate BMP Inspection and Maintenance programs, practices and effectiveness. Findings and recommendations will be used to improve the program. The completion of this goal will be measured by the submission of the water quality sampling plan and subsequent sampling results and recommendation response in the annual report. This information will be kept in the MS4 Coordinator's files.*

**An update on this measure will be provided in the 2018 Annual Report.**

## ***Retrofit Program***

### **8A- Retrofit Program Assessment (11/15/18)**

*Assess the feasibility and need for a retrofit program to include an analysis of the benefits (i.e. pollutants of concern, BMP effectiveness, waterway priority, TMDL, etc.), feasibility (i.e. budget, life cycle, etc.) and develop a retrofit/maintenance plan to implement program starting in 2019. The completion of this goal will be measured by a summary of the findings and retrofit/maintenance plan in the 2018 annual report and the inclusion in the permit renewal. This information summary will be kept in the MS4 Coordinator's files.*

**An update on this measure will be provided in the 2018 Annual Report.**